

WHAT IS CLAIMED IS:

1. A vaccine composition against feline immunodeficiency virus (FIV), comprising an immunologically effective amount of one or more of a GAG protein, POL protein, ENV protein or regulatory protein from an FIV strain.
- 5 2. The vaccine composition of claim 1, comprising a combination of FIV proteins.
3. The vaccine composition of claim 2, wherein the proteins comprise at least two different FIV proteins selected from among the FIV structural and FIV non-structural proteins.
4. The vaccine composition of claim 2, wherein the proteins comprise at least two different GAG proteins from FIV.
- 10 5. The vaccine composition of claim 2, wherein the proteins comprise at least one FIV structural protein and at least one FIV non-structural protein.
6. The vaccine composition of claim 2, wherein the proteins comprise at least three different FIV proteins selected from among the FIV structural and FIV non-structural proteins.
7. The vaccine composition of claim 2, wherein the proteins comprise at least four different
- 15 FIV proteins selected from among the FIV structural and FIV non-structural proteins.
8. The vaccine composition of claim 2, wherein the proteins comprise at least five different FIV proteins selected from among the FIV structural and FIV non-structural proteins.
9. The vaccine composition of claim 2, wherein the proteins comprise at least six different FIV proteins selected from among the FIV structural and FIV non-structural proteins.
- 20 10. The vaccine composition of claim 2, wherein the proteins comprise at least seven different FIV proteins selected from among the FIV structural and FIV non-structural proteins.
11. The vaccine composition of claim 2, wherein the combination of FIV proteins is selected from the group consisting of GAG/MA/CA/NC; GAG/ENV; GAG/MA/CA/NC/ENV/SU/TM; MA/CA/NC; GAG/MA/NC/DU/PR; and MA/CA/NC/SU/TM.
- 25 12. The vaccine composition of claim 2, further comprising an immunomodulatory component selected from the group consisting of an adjuvant, a cytokine, and a polynucleotide molecule comprising a nucleotide sequence encoding a cytokine.
13. A method of preparing a vaccine composition against feline immunodeficiency virus (FIV), comprising combining an immunologically effective amount of a combination of FIV polypeptides, which
- 30 combination is selected from the group consisting of GAG/MA/CA/NC, GAG/ENV, GAG/MA/CA/NC/ENV/SU/TM, MA/CA/NC, GAG/MA/NC/DU/PR, and MA/CA/NC/SU/TM; with a veterinarily acceptable carrier.
14. A method of vaccinating a cat against feline immunodeficiency virus (FIV), comprising administering to the cat the vaccine composition of claim 1.
- 35 15. An oligonucleotide molecule selected from the group consisting of SEQ ID NOS: 2 to 49, or the complements of said sequences.